



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,325	08/25/2000	Andrew John Holmes	TS7564 (US)	6381
23632	7590	07/25/2006	EXAMINER	
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			MCAVOY, ELLEN M	
			ART UNIT	PAPER NUMBER

1764

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/648,325

Applicant(s)

HOLMES ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews et al (4,462,918) in view of European Patent Application (0 434 464 A1) and Karn (4,627,928).

Applicants' arguments filed 15 May 2006 have been fully considered but they are not persuasive. As previously set forth, Matthews et al ["Matthews"] teach lubricating oil compositions, and in particular a lubricating oil composition which may be used as a hydraulic fluid (column 1, lines 5-7). The composition comprises a major proportion of a lubricating oil and a minor proportion of each of a Group II metal dithiophosphate and a compound of applicants' formula I (column 1, lines 30-48). The combination of the Group II metal dithiophosphate anti-wear additive with compounds of formula I gives improved anti-wear performance (column 1, lines 49-60). Most preferably, the Group II metal dithiophosphate is a zinc dialkyl dithiophosphate of which the alkyl groups contain 3-20 carbon atoms (column 2, lines 7-14). The combination of additives may suitably be used with other additives (column 2, lines 38-42). While Matthews teach the addition of other additives, Matthews differ from the instant claims in not teaching the addition of a magnesium salicylate.

European Patent Application 0 434 464 A1 (hereafter EPA '464) teach lubricant compositions especially useful as hydraulic fluids containing an amino succinate ester as

corrosion inhibitor (abstract). EPA '464 teach that when used in an acidic environment, it can be desirable to incorporate, inter alia, overbased alkylsalicylate (page 3, lines 49-52).

Karn is relied on as teaching overbased magnesium alkylsalicylates as additives for hydraulic fluids (column 17, lines 41-47). Karn teaches that the magnesium salts can be characterized as basic hydroxyl-containing alkylated aromatic carboxylic acid salts having a magnesium content of at least 150% up to 500% of the stoichiometrically equivalent amount of magnesium based on the amount of total acid present. The examiner is of the position that "up to 500%" is indistinguishable from "more than 500%" of the claims. It would also be obvious to add overbased magnesium alkylsalicylate in an amount sufficient to result in greater than 500% magnesium in the compositions.

The examiner maintains the position that it would have been *prima facie* obvious to one having ordinary skill in the lubricant art at the time the invention was made to have added the overbased magnesium alkylsalicylate of Karn to the lubricating composition of Matthews as taught by EPA '464 because Matthews specifically teaches that other conventional lubricant additives may be incorporated into the composition of their invention.

Applicants argue that:

"The examiner has not pointed to a teaching or suggestion in any of the cited references that the use of magnesium alkylsalicylate salts in combination with ZnDTP in a hydraulic fluid is a result effective variable."

This is not deemed to be persuasive because applicants are claiming oil compositions containing specific amounts of two (magnesium salicylate and zinc DTP) or three (additive of formula I) additives in a lubricant base oil and methods of formulating the compositions

comprising the step of combining the well-known lubricant additives. Such compositions and methods have been found to be *prima facie* obvious as outlined above. The examiner is of the position that the claimed compositions are not even required to be used as a hydraulic fluid since intended use or preamble limitations carry no weight in composition claims. It has been held that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

It is not clear exactly what is meant by “result effective variable” as argued by applicants. Applicants argue that the application illustrates the result effective nature of choosing magnesium salicylate over calcium salicylate in a 250 hour test, and that the results presented in the Declaration under 37 CFR 1.132 by Dr. Dixon demonstrates that the use of a combination of ZnDTP and magnesium salicylate in a hydraulic fluid is a “result effective variable” since the composition exhibited consistently low total wear over 1000 hours. This is not deemed to be persuasive because basic magnesium salicylate is taught as an effective lubricant additive by Karn and the claimed invention is not limited to use in a wear environment. The examiner is of the position that since a *prima facie* case of obviousness is established, the burden shifts to the applicants to come forward with arguments and/or evidence to rebut the *prima facie* case. See, e.g., *In re Dillon*, 919 F.2d at 692, 16 USPQ2d at 1901. Additionally, the evidence must be reasonably commensurate in scope with the claimed invention. See, e.g., *In re Kulling*, 897 F.2d

1147, 1149, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 777 (Fed. Cir. 1983). The examiner is of the position that the results presented are not reasonably commensurate in scope with the claimed invention since only one example was presented containing 0.012 wt.% magnesium salicylate having a total base number of 345 and a magnesium content of 550% of the stoichiometrically equivalent amount of magnesium, and 0.25 wt.% zinc DTP, and the claims recite much broader ranges for these two components, i.e., 0.001 to 1 wt.% magnesium salicylate wherein the magnesium content is up to about 750% of the stoichiometrically equivalent amount of magnesium, and 0.1 to 1 wt.% zinc DTP. It has been held that in rebutting the established *prima facie* case of obviousness, one test is generally not sufficient where there was no adequate basis for concluding that the other claimed compounds would behave the same way. *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972).

Claim Rejections - 35 USC § 103

Claims 7-12, 18, 20, 22-33, 39, 40 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagishita et al (6,306,801).

Applicants' arguments filed 15 May 2006 have been fully considered but they are not persuasive. As previously set forth, Yagishita et al ["Yagishita"] disclose a lubricating oil composition comprising a base oil, (A) 0.5 to 20% by mass of an acylated succinimide, (B) 0.05 to 0.3% by mass of zinc dithiophosphate, in terms of the phosphorus content, and (C) 0.5 to 4.0% by mass of a metallic detergent, in terms of the sulfated ash content, based on the total mass of

the composition. The lubricating oil composition is preferably used as a gasoline engine oil but other types of oils are taught including hydraulic actuation oils. See column 2, lines 3-13. The examiner is of the position that the hydraulic fluid limitation of the compositions and additive packages of the claims is taught and the zinc dithiophosphate limitation of the claims is taught. The method of claims 22-38 is taught when the compositions of Yagishita are used in a hydraulic environment. Applicants' open-ended claim language "comprising" allows for the addition of other additives to the composition including succinimide component (A). Yagishita allows for the addition of other additives to the compositions including pour point depressants and antifoamers. See column 11, line 58 to column 12, top. The metallic detergent component of Yagishita may be a basic alkaline earth metal salicylate having a total base number of 100 to 450 mgKOH/g. See column 9, lines 7-40. Calcium and/or magnesium salts are taught in column 10, lines 15-21. Applicants' claimed compositions differ by specifying that the magnesium salicylate have a magnesium content of more than 500% of the stoichiometrically equivalent amount of magnesium. However, most references characterize overbased metal salts in terms of total base number or TBN. Indeed, applicants teach in the specification on pages 4-5 that the overbased magnesium salicylate can be characterized by their total base number, and that the total base number is preferably at least 300 mgKOH/g and at most 600 mgKOH/g. Applicants teach that another method of characterizing overbased magnesium salicylates is by the magnesium content relative to the stoichiometrically equivalent amount of magnesium based on the amount of total acid present, and that the overbased magnesium salicylates have a magnesium content of more than 500%. Thus, the examiner is of the position that the claimed

“magnesium content of more than 500% of the stoichiometrically equivalent amount of magnesium based on the amount of total acid present”, is roughly equivalent to 300-600 mgKOH/g. In the Example set forth on page 10, a highly overbased magnesium alkylsalicylate having a TBN of 337 mgKOH/g also has a magnesium content of about 750% of the stoichiometrically equivalent amount of magnesium based on the amount of total acid present. Thus the examiner is of the position that the basic magnesium salicylate detergent component of Yagishita meets the limitations of the claimed magnesium salicylate detergent.

Applicants argue that:

“The examiner has not pointed to any teaching or suggestion in Yagishita that would motivate a person of ordinary skill in the art to make the selections required to produce the claimed combination. Merely identifying individual components of a claimed invention in a single reference does not supply sufficient “evidence” to support a case of *prima facie* obviousness”. And that “The examiner has not and cannot provide the required particular findings why a person of ordinary skill in the art would make a hydraulic fluid (rather than Yagishita’s preferred ‘gasoline engine oil’) and then use magnesium salicylate salts (rather than Yagishita’s preferred calcium salicylate salts) in that hydraulic fluid, thereby producing the claimed combination.”

This is not deemed to be persuasive because, as set forth above, the claimed compositions are not required to be used as a hydraulic fluid since intended use or preamble limitations carry no weight in composition claims. The composition claims comprising a lubricant base oil, basic magnesium salicylate and zinc DTP are known in the lubricant art as outlined above. Although Yagishita prefers the salicylate salts to be calcium salts, magnesium salts are taught as suitable. See column 10, lines 15-21.

Claim Rejections - 35 USC § 103

Claims 13-17, 19, 21, 34-38, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagishita et al (6,306,801) in combination with Matthews et al (4,462,918).

Yagishita is relied on as outlined above. The above rejected claims differ from Yagishita by adding 0.001 to 5 % by weight of a dialkylester of an aminosuccinic acid compound having the structure according to formula I set forth in dependent claim 13. However, Matthews et al ["Matthews"] teaches such an aminosuccinic acid ester as an anti-rust agent in hydraulic fluid compositions which are especially effective in combination with a metal dithiophosphate anti-wear additive. See column 1, line 31 to column 2, line 43. Having the prior art references before the inventors at the time the invention was made it would have been obvious to have added the aminosuccinic acid ester compound to the composition of Yagishita if its known imparted property was so desired. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation relied on by the examiner is the teaching in Yagishita allowing for the addition of conventional additives to the compositions including rust preventives and the teaching in Matthews that the combination of additives may suitably be used with other additives.

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

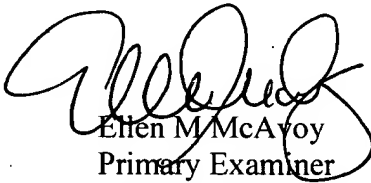
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1764

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
July 21, 2006